

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Fax³ reçu de : 617 452 1666

83/000000 23:48 Pg : 27

PATENT
Attorney Docket No. 5725.0429-00
Customer No. 22,852

H 25
GWT
4-22-03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Marie-Pascale AUDOUSSET)
Application No. 09/335,742) Group Art Unit: 1751
Originally filed: June 18, 1999) Examiner: M. Einemann
CPA Filed: April 10, 2001)
For: DYE COMPOSITIONCONTAINING)
1,8-BIS(2,5-DIAMINOPHOXY)-3,6-)
DIOXAOCTANE, AN ADDITIONAL)
OXIDATION BASE AND A COUPLER)
AND DYEING PROCESS)

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

DECLARATION UNDER 37 C.F.R. 1.132

I, Marie-Pascale AUDOUSSET, declare and state that:

1. I am a French citizen, residing at 1 Allée Louis Jouvet, 92600 Asnieres, France.
2. I have been awarded a degree in Chemical Engineering from the École Nationale Supérieure de Chimie de Paris, and am a Doctor in Organic Chemistry.
3. I have been employed by L'ORÉAL since 1986 and I am presently a Laboratory Supervisor of the hair dyeing research laboratory at L'ORÉAL. During my employment at L'ORÉAL, I have been engaged in research and development regarding hair dyeing.
4. I am the inventor of the above-identified application.

Fax reçu de : 617 452 1666

83 83 23:48 Pg: 28

Attorney Docket No. 5725.0429-00
Application No. 09/335,742
Customer No. 22,852

5. Given my education and experience, particularly in the area of hair dyeing, I consider myself able to provide the following testimony based on experiments conducted by me or under my direct supervision.

COMPARATIVE TESTING

6. Comparative testing was performed with inventive compositions 1, 2, and 3, and comparative compositions 4, 5, and 6.

I. Compositions

The formulations of compositions 1-6 are summarized in Table 1, below. Inventive compositions 1-3 include additional oxidation bases paraphenylenediamine, N,N-bis(2-hydroxyethyl) paraphenylenediamine monohydrate sulfate, and 2-(2'-hydroxyethyl) paraphylene diamine dichlorhydrate, respectively. Each of comparative compositions 4-6 include an additional base not in accordance with the invention.

Fax reçu de : 617 452 1666

83 83 23:40 pg: 2

Attorney Docket No. 5725.0429-00
 Application N . 09/335,742
 Customer No. 22,852

Table 1

COMPOSITIONS	1 (inv)	2 (inv)	3 (inv)	4 (comp.)	5 (comp.)	6 (comp.)
1,8-bis-(2,5-diaminophenoxy)-3,5-dioxaoctane, tetrachlorhydrate, monohydrate	0.39	0.39	0.39	0.38	0.38	0.39
5-N-(β-hydroxyethyl)amino 2-methyl phenol (coupler)	0.5	0.5	0.5	0.5	0.5	0.5
Paraphenylenediamine (additional oxidation base)	0.16	-	-	-	-	-
N,N-bis(β-hydroxyethyl) paraphenylenediamine monohydrate sulfate (additional oxidation base)	-	0.47	-	-	-	-
2-(β-hydroxyethyl) paraphenylenediamine dichlorohydrate (additional oxidation base)	-	-	0.675	-	-	-
1-methoxy-2,5-diamino benzene dichlorohydrate (additional oxidation base)	-	-	-	0.32	-	-
2-methyl 4-amino phenol (additional oxidation base)	-	-	-	-	0.18	-
Orthoaminophenol (additional oxidation base)	-	-	-	-	-	0.16
Dyeing medium	(*)	(*)	(*)	(*)	(*)	(*)
Water q.s.p.	100 g	100 g	100 g	100 g	100 g	100 g

(*) DYEING CARRIER (*)

- Polyglycerolated oleyl alcohol containing 2 mol of glycerol 4.0 g
- Polyglycerolated oleyl alcohol containing 4 mol of glycerol (78% of AM) 5.7 g AM
- Oleic acid 3.0 g
- Oleyl amine containing 2 mol of ethylene oxide sold under the name ETHOMEEN O12 by the company AKZO 7.0 g
- Diethylaminopropyl laurylaminosuccinate sodium salt containing 55% of AM 3.0 g AM
- Oleyl alcohol 5.0 g
- Oleic acid diethanolamide 12.0 g
- Propylene glycol 3.5 g
- ✓ - Ethyl alcohol 7.0 g
- Dipropylene glycol 0.5 g
- Propylene glycol monomethyl ether 9.0 g
- ✓ Sodium metabisulphite in aqueous solution containing 35% of AM 0.455 g AM
- Ammonium acetate 0.8 g
- ✓ - Antioxidant, sequestering agent q.s.
- Fragrance, preserving agent q.s.
- ✓ Aqueous ammonia containing 20% of NH₃ 10.0

83/03 23:48 Pg: 30

Attorney Docket No. 5725.0429-00
 Application No. 09/335,742
 Customer No. 22,852

II. Dyeing Process

At the time of use, each of the above compositions was mixed, weight for weight, with a 20 volume hydrogen peroxide solution having a pH of 3.

Each of the resulting mixtures was then applied onto locks of permed hair containing 90% of white hair. After 30 minutes, the hair was then rinsed with water, washed with a standard shampoo, rinsed again and dried.

III. Tests

After dyeing, the colored locks were exposed under a Xenon lamp emitting a UV radiation between 300 and 380 nm with a device of the type XENOTEST 150S (ATLAS). The locks were irradiated for 40 hours at radiations ranging from 300 to 800 nm, equivalent to sun power of 1250 W/m². The relative humidity level was 60%. The color of the locks was measured before and after the sun test.

IV. Color Determination

The color of the hair was determined by using the L*a*b* system, with a MINOLTA CM2002 @ spectrophotometer.

According to this system, L* indicates the lightness. The most intense lightness value is the color of the dyed hair. The chromaticity coordinates are expressed by the parameters a* and b*, a* indicating the axis of red/green shades and b* the axis of yellow/blue shades. ΔE, which is the color variation between a colored lock and a colored lock after the suntest, is obtained from the following formula:

$$\Delta E = \sqrt{(L^* - L_{\circ}^*)^2 + (a^* - a_{\circ}^*)^2 + (b^* - b_{\circ}^*)^2}$$

03/04/03 13:48 pg. 31

Attorney Docket No. 5725.0429-00
 Application No. 09/335,742
 Customer No. 22,852

wherein L* indicates lightness, a* and b* are the chromaticity coordinates of the colored locks after the suntest, L₀* indicates the lightness, and a₀* and b₀* are the chromaticity of the colored locks before the suntest. The lower the value of ΔE, the more resistant is the color of the dyed hair. These results are summarized in Table II, below.

Table II

04.15.03

Examples	Color before the suntest xenonuvil			Color after the suntest xenonuvil			Color fading
	L*	a*	b*	L*	a*	b*	
1	20.6	7.1	-2.9	21.9	8.1	-1.7	2.0
2	19.4	5.3	-6.5	20.7	6.2	-6.1	1.6
3	21.7	7.9	-2.9	23.5	9.3	-1.4	2.7
4	20.4	7	-5.4	23.8	7.9	-3.7	4.0
5	29	12.3	0.8	33.4	11.5	4	5.5
6	25.7	9.2	-3	30.4	9.1	0.3	5.8

As can be seen from Table II, hair dyed with inventive compositions 1-3 shows a much smaller variation in color after the suntest compared to hair dyed with comparative compositions 4-6. These significantly superior results were surprising and unexpected.

Accordingly, these examples show that the color of hair dyed with compositions according to the invention (1, 2 and 3) is unexpectedly more resistant to prolonged exposure to uv radiation than the color of hair dyed with the comparative compositions (4, 5 and 6) and are thus superior thereto.

7. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under

Attorney Decl
Applicant

Section 1001 of Title 18 of the United States Code, and that such voluntary statements may jeopardize the validity of the application or any patent.

Date: 04.15.03

By: _____
Marie-Pascale Audouze

Marie-Pascale
Audouze